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Application Number: 10/792,197

HYDRODYNAMICS CONTROL METHOD AND APPARATUS

WHAT I CLAIM IS:

1. (Canceled) A method for establishing a plug flow through a process vessel comprising an enclosed cylindrical container, an inlet conduit, an outlet conduit and a permeable barrier placed in the flow path of fluid that is passing through said container, said permeable barrier constructed in a manner that will permit adjustment of the permeability to compensate for variations in the feed rate, density and viscosity of the said fluid.
2. (Canceled) The method of claim 1 whereby said permeable barrier is of louvered shutter construction with the louvers being adjustable from wide open to closed.
3. (Canceled) The method of claim 1 whereby the permeability of said permeable barrier can be discretely regulated at various areas on said barrier.
4. (Canceled) The method of claim 2 and including a mechanism on the exterior of said vessel connected to said permeable barrier in a manner that will permit manipulation of the louvers.
5. (Withdrawn) An apparatus for establishing a plug flow of fluid passing through a process vessel consisting of a permeable barrier placed within said vessel in the flow path of said fluid and including a means for adjusting the permeability of the said barrier.
6. (Withdrawn) An apparatus of claim 5 including a louvered shutter type construction of the permeable barrier with a means for discrete adjustment of the permeability of various areas of said barrier.
7. (Withdrawn) An apparatus of claim 6 including an external means on said vessel connected to said louvered shutter type permeable barrier in such a manner as to permit discrete adjustment of the louvers from wide open to closed.

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8.(Currently Amended) A method for creating [I] in a processing vessel, through which a fluid flows for processing, and [wherein] the process is time sensitive and [the] said fluid flowing through the vessel for processing may be of varying flow rate, density and viscosity as would be the case if said fluid is oil and water, [for establishing] a plug flow of said fluid by the placement of one or more permeable barrier inside of said processing vessel in the flow path of said fluid, said barrier constructed in a manner, such as that of a louvered shutter, where the louvers are flat surfaced slats, individually rotatable from a position where said louver's flat surface is perpendicular to said flow path of said fluid to a position where said louver's flat surface is parallel to said flow path, that will permit the permeability to be adjusted discretely within different areas of the [same] said barrier to compensate for variations in the flow rate, density and viscosity of the fluid being processed in different areas of said processing vessel.

9.(Currently Amended) The [means] method of claim [1] 8 where the fluid being processed is oil and water and the permeability of [same] said barrier [is] can be varied independently in each of the areas of the processing vessel through which said oil and water flow.

10.(Currently Amended) The [means] method of claim [1] 8 where [same] said barrier is of a rotatable louvered shutter construction whereby said rotation of said louvers can be independently regulated in various areas of [same] said barrier within [the] said processing vessel and including a means on the exterior of said processing vessel, connected to said rotatable louvers, for rotating said louvers.

11.(Cancel) The means of claim 10 including additional means on the exterior of the processing vessel connected to said rotatable louvered shutters for independently rotating said shutters to vary the permeability of same said barrier in different areas inside of said processing vessel.